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09/905,399	07/16/2001	Frederick F. Loeb	AD-237J	5317

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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT PAPER NUMBER

2683

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/905,399	LOEB ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Stephen M. D'Agosta	2683	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

1. The applicant's amendment overcomes the examiner's objections.
2. The examiner has provided new art to reject the newly amended claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3 and 18** rejected under 35 U.S.C. 102(b) as being Kinney by US 5,708,833 (hereafter Kinney) and further in view of Wu et al. US 6,041,105.

As per **claim 1**, Kinney teaches a jack module with integrated modem interface circuits (abstract teaches computer receiving a removable modem card, figures 6-7 and C2, L65 to C3, L50 - The examiner notes that Kinney teaches an interchangeable radio or modem card for insertion into a computer device [C7, L20-29 and/or C8, L1-3]).  
comprising:

A jack housing for receiving a plug (eg. modem card – see figure 1 shows modem/radio card #10 being inserted into a housing, #11, figure 2b is the modem-only embodiment);

A plurality of contacts in said housing for engaging contacts on a plug (eg. modem card – see figure 4, C3, L23-35 and C6, L30-44);

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A plurality of terminals in said housing interconnection (figures 5-6 show the card being inserted into the housing which is inherently connected to the computer device for stability of the housing and additionally secures the modem card to said housing);

A line side circuit and jack housing interconnecting with said contacts (C7, L20-29 teaches the modem card being connected to a traditional phone line which inherently requires the modem to contain a line side circuit (eg. analog interface) interconnected in the housing),

**But is silent on the housing interconnecting a circuit board and an integrated line side circuit.**

Wu teaches an adaptor circuit for computers to support computer telephony (title, abstract, figure 1a, 1b) whereby the adaptor housing interconnects to a circuit board (figure 2 shows line side inputs #14/16 and circuits on a circuit board contained in the adaptor, ie. #207/208, also see C1, L18-60) and interfaces to computer #13/18 and integrated line side circuit #14/16).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that the housing interconnecting a circuit board and an integrated line side circuit, to provide one adaptor device with integrated housing, circuit board and line side interfaces to support various interconnections.

As per **claim 2**, Kinney teaches claim 1 in which said jack housing receives a public services telephone network plug (C7, L20-29 teaches connecting to a phone line).

As per **claim 3**, Kinney teaches claim 1 in which said jack housing receives an RJ-11 plug (C7, L20-29 teaches interconnecting to a phone line which inherently use RJ-11 plug interfaces).

As per **claim 18**, Kinney teaches claim 1 **but is silent on** in which the terminals are dismountable from the circuit board to decouple the jack housing from the circuit board.

Wu teaches an adaptor circuit for computers to support computer telephony (title, abstract, figure 1a, 1b) whereby the adaptor housing interconnects to a circuit board (figure 2 shows line side inputs #14/16 and circuits on a circuit board contained in the adaptor, ie. #207/208, also see C1, L18-60) and interfaces to computer #13/18 and integrated line side circuit #14/16).

Since Wu's design easily allows for the coupling/decoupling between computer and phone line, and Kinney's device provides coupling/decoupling as well, one skilled would provide for a switch to couple/decouple the jack housing from the circuit board, thus allowing the user to stay physically connected to the phone link but not electrically connected (since the switch is open).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that the terminals are dismountable from the circuit board to decouple the jack housing from the circuit board, to provide a switchable interface that couples/decouples the computer to/from the phone network.

**Claims 4-5** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu as applied to claim 1 above, and further in view of Baginy et al. US. 6,307,753 (hereafter Baginy)

As per **claim 4**, Kinney teaches claim 1 **but is silent on** wherein said terminals includes pins.

Baginy teaches plug-in cards having known connection interfaces, for example of the kind supplied as memory cards, modem cards, fax cards or the like in PCMCIA Standard. Such plug-in cards have a plastic frame on which one or two connectors are fastened and within which the printed-circuit board inserted with electronic components mounted thereon is arranged and retained in a specifically predetermined position in the above-mentioned manner (C1, L29-35 teaches modem housing connector attached to

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printed circuit board [PCB] and C1, L49, L55 to C2, L4 teaches attaching housings to PCB via [solder] pins).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that (solder) pins are used, to provide means for accurately positioning/fixing the connector to the PCB.

As per **claim 5**, Kinney in view of Baginy teaches claim 4 **but is silent on** wherein said terminals include solder pins.

Baginy teaches Plug-in cards having such a connection are also known, for example of the kind supplied as memory cards, modem cards, fax cards or the like in PCMCIA Standard. Such plug-in cards have a plastic frame on which one or two connectors are fastened and within which the printed-circuit board inserted with electronic components mounted thereon is arranged and retained in a specifically predetermined position in the above-mentioned manner (C1, L29-35 teaches modem housing connector attached to printed circuit board [PCB] and C1, L49, L55 to C2, L4 teaches attaching housings to PCB via [solder] pins).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney in view of Baginy, such that (solder) pins are used, to provide means for accurately positioning/fixing the connector to the PCB.

**Claim 6** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu as applied to claim 1 above, and further in view of Scott et al. US. 6,654,409 (hereafter Scott)

As per **claim 6**, Kinney teaches claim 1 **but is silent on** further including an isolation circuit in said housing between said line side circuit and said terminals for isolating said line side circuit from a system side circuit.

Scott teaches (figure 16) a general block diagram of digital DAA circuitry 110 including phone line side circuitry 118, an isolation barrier 120, and powered side circuitry 116 according to the present invention. The isolation barrier 120 may include one or more capacitors and allow for the transmission of digital information between the

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isolation interface 1614 in the phone line side circuitry and the isolation interface 1610 in the powered side circuitry. The phone line side circuitry 118 may be connected to phone lines of a telephone network system, and the powered side circuitry 116 may be connected to external controllers, such as digital signal processors (DSP), that may be part of a communication device, such as a phone or modem (C20, L42-54).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that an isolation circuit in said housing between said line side circuit and said terminals for isolating said line side circuit from a system side circuit, to provide means for isolating one network from another network and comply with FCC guidelines.

**Claims 7-9** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu in view of Scott as applied to claim 6 or 1 above, and further in view of Tran US. 6,044,422 (hereafter Tran)

As per **claim 7**, Kinney in view of Scott teaches claim 6 in which said system side circuit is on said mounting member.

Tran teaches a docking station with telephone connector of the usual RJ-11 and a modem employed in a laptop computer 10 is a built-in modem, located on a daughter-board within the housing of the laptop, rather than being a PCMCIA card as is the usual practice. The advantage of a built-in modem is that it is less costly and more reliable; if most laptop computers being manufactured are going to have modems installed anyway, then it is much more cost-effective and reliable to install the components of the modem on the motherboard or a daughter board, rather than incurring the parts and manufacturing expense of a connector to a PCMCIA modem card and the card itself (C3, L30-63).

The examiner notes that since Tran teaches a built-in modem, then the system side is inherently mounted/contained in the computer (and/or can be inserted via PCMCIA card).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that the system side circuit is on said

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mounting member, to provide for the modem to be either built into and/or modularly added to the laptop to allow the user to select which components they need.

As per **claim 8**, Kinney teaches claim 1 **but is silent on** in which said mounting member includes a motherboard.

Tran teaches a docking station with telephone connector of the usual RJ-11 and a modem employed in a laptop computer 10 is a built-in modem, located on a daughter-board within the housing of the laptop, rather than being a PCMCIA card as is the usual practice. The advantage of a built-in modem is that it is less costly and more reliable; if most laptop computers being manufactured are going to have modems installed anyway, then it is much more cost-effective and reliable to install the components of the modem on the motherboard or a daughter board, rather than incurring the parts and manufacturing expense of a connector to a PCMCIA modem card and the card itself (C3, L30-63).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that the mounting member includes a motherboard, to provide for the modem to be built into the laptop which less costly and more reliable.

As per **claim 9**, Kinney teaches claim 1 **but is silent on** in which said mounting member includes an add-in card.

Tran teaches a docking station with telephone connector of the usual RJ-11 and a modem employed in a laptop computer 10 is a built-in modem, located on a daughter-board within the housing of the laptop, rather than being a PCMCIA card as is the usual practice. The advantage of a built-in modem is that it is less costly and more reliable; if most laptop computers being manufactured are going to have modems installed anyway, then it is much more cost-effective and reliable to install the components of the modem on the motherboard or a daughter board (eg. add in card), rather than incurring the parts and manufacturing expense of a connector to a PCMCIA modem card and the card itself (C3, L30-63).



It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that the mounting member includes a daughter, to provide for the modem to be an add-in component that is added if/when specified by the user which the user to pay for only those components they want.

**Claims 10-11** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu as applied to claim 1 above, and further in view of Price et al. US. 5,783,999 (hereafter Price)

As per **claims 10-11**, Kinney teaches claim 1 **but is silent on** in which the jack housing includes an electrical protection circuit/fuse.

Price teaches Solutions to this particular problem have heretofore not been entirely satisfactory. One solution is to protect the DAA line interface circuitry with a fuse type device. If the PCMCIA modem is taken "off-hook" while connected to a PBX that supplies an excessively high current, the fuse or fusible resistor will open, and thereby protect the DAA line interface circuitry. However, the fuse must then be physically replaced before the modem is again operative. Although this approach may work in an external type modem, wherein the fuse is relatively easy to access and replace, it is not practical in a PCMCIA modem card, wherein the electrical components are miniaturized and disposed within a sealed enclosure. Typically, the PCMCIA card must be returned to the manufacturer to have the fuse replaced--a costly and time consuming process (C4, L32-46) and as noted above, the portable computer user is often unaware that a particular telephone jack is connected to a PBX system that will cause damage to the PCMCIA modem's DAA circuitry. Thus, even if a PCMa modem card is equipped with a fuse, and the modem is inadvertently connected to such a PBX, the modem will no longer be operable because the fuse remains open. The user typically will not know why the PCMCIA modem card has failed and is no longer operative. Diagnosis of the problem is very difficult--again resulting in a costly and time consuming process (C4, L20-32).

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It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that the jack housing includes electrical protection/fuse, to provide protection to the equipment/modem should an excessive current be supplied to the device.

**Claim 12** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu in view of Price as applied to claim 11 above, and further in view of Bingel US. 5,848,150 (hereafter Bingel)

As per **claim 12**, Kinney in view of Price teaches claim 11 **but is silent on** in which said fuse includes a UL1950 fuse.

Bingel teaches a telecommunication system that meets surge and safety requirements of industry standard UL1950, Third Edition, and applicable requirements of FCC, Part 68 (whereby the examiner and one skilled realizes surge protection includes use of a fuse) [C3, L53-56].

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney in view of Price, such that a UL1950 fuse is used, to comply with industry standard surge/safety requirements.

**Claim 13** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu as applied to claim 1 above, and further in view of Right et al. US. 4,506,254 (hereafter Right)

As per **claim 13**, Kinney teaches claim 1 in which said jack housing further includes line reversal diode bridge.

Right teaches a device that includes a diode bridge D361 and therefore, irrespective of the polarity of the potential on the cable pair 101 and 102 a positive potential may be applied to the lower terminal 362 and a negative potential applied to the upper terminal 363 of the detector 364 (C5, L51-64).

While Right teaches a smoke detector, he further states that it should be understood that it may comprise any other type of detector or device that is suitable for detecting the desired nonstandard condition and which will close a pair of contacts to

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connect terminal 363 to lead 365. It will be seen that the detector 360, because of the diode bridge 361 will be operative irrespective of the polarity applied to the cable pair 101 and 102.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that a line reversal diode bridge is used, to provide ability for the device to operate no matter how the power leads are attached.

**Claim 14** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu as applied to claim 1 above, and further in view of Hahn et al. US. 5,973,948 (hereafter Hahn).

As per **claim 14**, Kinney teaches claim 1 **but is silent on** in which said jack housing further includes compliance circuits.

Hahn teaches People rely heavily on a wide variety of electrical devices. Almost all of these devices draw power ultimately from a national standard source, usually delivered to the user through a wall outlet or socket. This leads to a challenge for the manufacturer of electrical devices destined for international use: while many electrical devices are sold for use throughout the world, there is no world standard for electrical plug configurations, size, shape, voltage or number of prongs. The wide variety of socket configurations in use worldwide burdens international suppliers of mobile products to varied countries and international travelers who wish to use electrical devices in a portable fashion. Moreover, different areas of the world use different voltage output standards. For example, in Europe and the U.K., the standard is 220 VAC, while in the U.S. the standard is 110 VAC (C1, L10-25 and C2, L45-61).

The examiner notes that Hahn teaches a device which would be incorporated into Kinney's system to support use in international locations.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney, such that it houses compliance circuits, to provide means for a person to use the device internationally.

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**Claims 15-16** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu in view of Price as applied to claim 6 above, and further in view of Scott.

As per **claim 15**, Kinney in view of Price teaches claim 6 **but is silent on** in which said isolation circuit includes at least one capacitor.

Scott teaches use of capacitors in the isolation circuit (abstract teaches use of isolation capacitors, see figure 2, #109 and #210).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney in view of Price, such that a capacitor is used, to provide means for isolation to be provided by several methods to include at least capacitors and transformers.

As per **claim 16**, Kinney in view of Price teaches claim 6 **but is silent on** in which said isolation circuit includes a transformer.

Scott teaches that transformers can provide high voltage isolation between primary and secondary windings, and also provide a high degree of rejection of lower voltage signals that exist across the barrier, since these signals appear as common mode in transformer isolated circuit applications. For these reasons, transformers have been commonly used to interface modem circuitry to the standard, two-wire telephone network. In modem circuitry, the signal transferred across the barrier is typically analog in nature, and signal communication across the barrier is supported in both directions by a single transformer (C2, L15-29).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney in view of Price, such that a transformer is used, to provide isolation (via capacitor and/or transformer) between a modem and phone network for optimal communications.

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**Claim 17** rejected under 35 U.S.C. 103(a) as being unpatentable over Kinney/Wu in view of Price as applied to claim 10 above, and further in view of Armistead et al. US 6,553,117 (hereafter Armistead).

As per **claim 17**, Kinney in view of Price teaches claim 10 **but is silent on** in which said protection circuit includes a lightning suppression circuit.

Armistead teaches a communication system that supports modem operation whereby Overall operation of the line input/output circuits is described in FIG. 6 and includes several line protection elements such as: common mode chokes (56 and 58) for suppressing EMI, surge protectors (60 and 62) for protection from lightning strikes and other high-voltage or high current events, and isolation transformers (64 and 66) for preventing DC groundpath problems (C5, L38-52).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Kinney in view of Price, such that lighting protection is used, to provide means for ensuring the user is not injured via lightning.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta  
PRIMARY EXAMINER  
2-23-05

A handwritten signature in black ink, appearing to be 'SD' or 'D'Agosta', located below the printed name and date.